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Read this document carefully before using this device. The guarantee will be expired by damaging of the device if you don't attend to the directions in the user manual. Also we don't accept any compensations for personal injury, material damage or capital disadvantages.

ENDA EPA741 PROGRAMMABLE AC/DC AMMETER

Thank you for choosing ENDA EPA741 programmable AC/DC ammeter.

*** 72 x 72mm sized.**
*** 4 digits display.**
*** Easy to use by front panel keypad.**
*** With current trafo or shunt can be used.**
*** Programmable scale between 5A and 9999A.**
*** Multifunctional alarm output (NO+NC) for upper and lower limits.**
*** CE marked according to Europan Norms.**
*** Measuring type can be selected AC, DC or True RMS**

Order Code : EPA741□-□□□-□□□□□□
1 2 3

1 - Input Type
S.....Internal Shunt Resistor
None...External Shunt Resistor

2 - Output
R.....Relay
None...No Relay
SSR....Logic output

3 - Supply Voltage
230VAC...230V AC
24VAC.....24V AC
SM.....9-30V DC / 7-24V AC

CE **RoHS Compliant**

TECHNICAL SPECIFICATIONS

ENVIRONMENTAL CONDITIONS	
Ambient/stroge temperature	0 ... +50°C/-25 ... 70°C
Max. Relative humidity	80% up to 31°C decreasing linearly 50% at 40°C.
Rated pollution degree	According to EN 60529 Front panel : IP65 , Rear panel : IP20
Height	Max. 2000m
⚠ Do not use the device in locations subject to corrosive and flammable gases.	

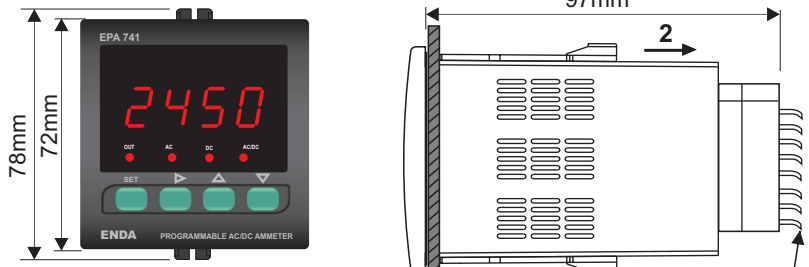
ELECTRICAL CHARACTERISTICS		
Supply	230V AC +10% -20%, 50/60Hz or 24V AC ±10% , 50/60Hz or optional 9-30V DC / 7-24V AC ±10% SMPS	
Power consumption	Max. 7VA	
Wiring	2.5mm² screw-terminal connections	
Scale	AC and RMS	0A...9999A (Specified c.trr parameter. For example:scale is 0A...5A for c.trr=5.00)
	DC	-999A...9999A (Specified c.trr parameter. For example:scale is -5A...5A for c.trr=5.00)
Sensitivity	0.002A x c.trr (For example , 0.01A for c.trr=5.00)	
Accuracy	AC	± 1% (full scale) (For square wave form ± 2%)
	DC	± 1% (full scale)
	RMS	± 1% (full scale) (For square wave form ± 2%)
Input Range	EPA741Sxx	-5A...5A (Device damages 10A peak and more current.)
	EPA741xx	-60mV...60mV (Device damages 50V peak and more voltage.)
Input Impedance	EPA741Sxx	12mΩ
	EPA141xx	40kΩ
Frequency Range	DC , 10Hz - 200Hz (For square wave form 10Hz-70Hz)	
EMC	EN 61326-1: 1997, A1: 1998, A2: 2001 (Performance criterion B for the EMC standard)	
Safety requirements	EN 61010-1: 2001 (Pollution degree 2, overvoltage category II)	

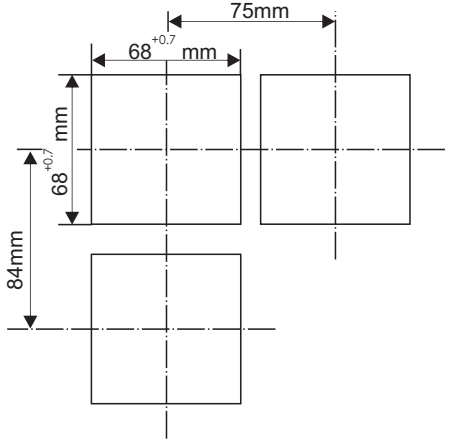
OUTPUTS	
Alarm output	Relay: 250V AC, 8A (for resistive load), NO+NC or 12V DC 20mA logic output.
Life expectancy for relay	Mechanical 30.000.000 ; Electrical 100.000 operation.

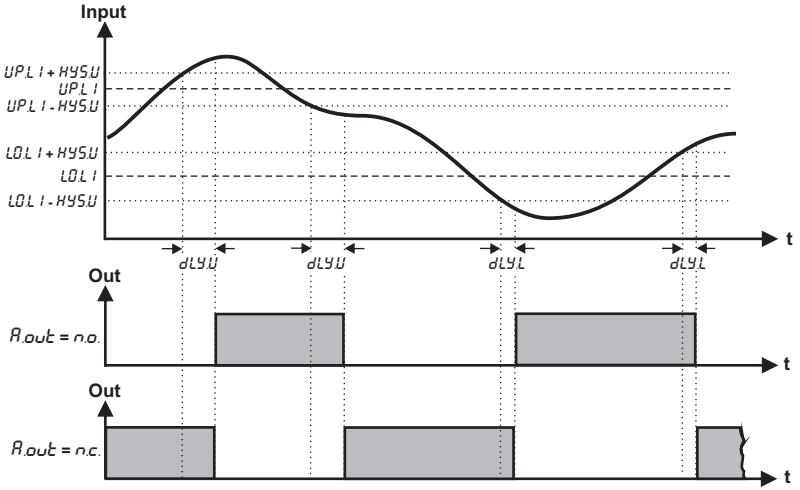
HOUSING		
Housing type	Suitable for flush-panel mounting. (According to DIN 43 700)	
Dimensions	W72xH72xD97mm	
Weight	EPA741	Approx. 350g (after packing)
	EPA741-24	Approx. 350g (after packing)
Enclosure material	Self extinguishing plastics.	
⚠ While cleaning the device, solvents (thinner, benzine, acid etc.) or corrosive materials must not be used.		

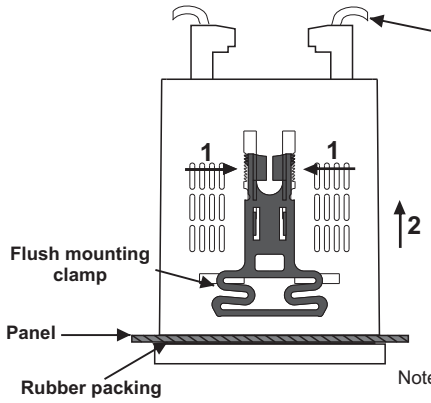
SİSEL MÜHENDİSLİK ELEKTRONİK SAN. VE TİC. A.Ş.
Yukarı Dudullu Barbaros Cad. Kutup Sok. No:20 34775 - ÜMRANİYE/İSTANBUL/TÜRKİYE
Tel : +90 216 499 46 64 Pbx. Fax : +90 216 365 74 01
url : www.enda.com.tr

DIMENSIONS









For removing mounting clamps:

- Push the flush-mounting clamp in direction **1** as shown in the figure left.
- Then, pull out the clamp in direction **2.**

Equipment is protected throughout by DOUBLE INSULATION

Holding screw 0.4-0.5Nm.

Note 1) While panel mounting, additional distance required for connection cables should be considered.
2) Panel thickness should be maximum 10mm.
3) If there is no 90mm free space at back side of the device, it would be difficult to remove it from the panel.

CONNECTION DIAGRAM

ENDA EPA741 is intended for installation in control panels.Make sure that the device is used only for intended purpose.The electrical connections must be carried on by a qualified staff and must be according to the relevant locally applicable regulations. During an installation, all of the cables that are connected to the device must be free of energy. The device must be protected against inadmissible humidity, vibrations, severe soiling and make sure that the operation temperature is not exceeded. The cables should not be close to the power cables or components.

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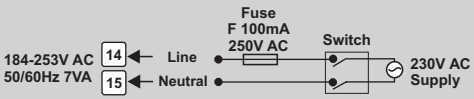
NOTE :

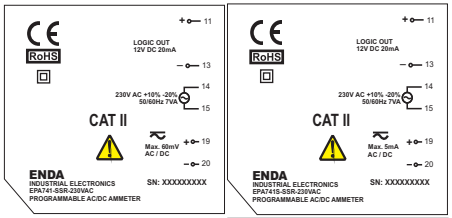
SUPPLY:

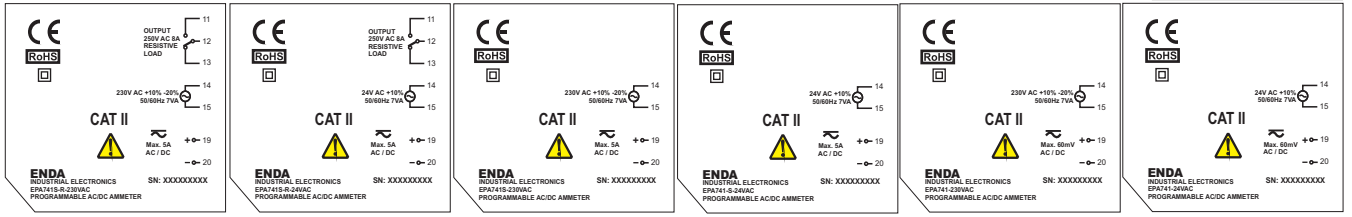


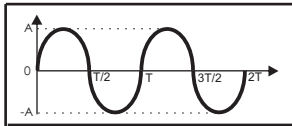
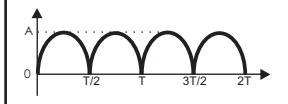
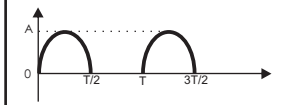
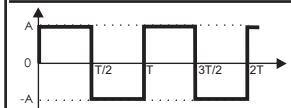
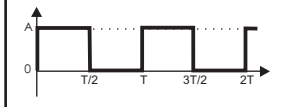
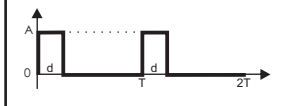
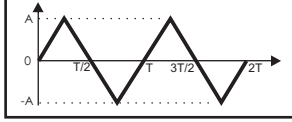
Fuse should be connected.

Cable size: 1,5mm²

1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.





	Rc	dc	Rc.dc (rms)
	$A\frac{1}{\sqrt{2}}$	0.000	$A\frac{1}{\sqrt{2}}$
	0.308 A	$A\frac{2}{}$	$A\frac{1}{\sqrt{2}}$
	0.386 A	$A\frac{1}{}$	$A\frac{1}{2}$
	A	0.000	A
	$A\frac{1}{2}$	$A\frac{1}{2}$	$A\frac{1}{\sqrt{2}}$
	$A\sqrt{\frac{d}{T}-\frac{d^2}{T^2}}$	$A\frac{d}{T}$	$A\sqrt{\frac{d}{T}}$
	$A\frac{1}{\sqrt{3}}$	0.000	$A\frac{1}{\sqrt{3}}$

RUNNING MODE

2450 → UP.L 1. → LO.L 1 → 2450

In Running mode, you can enter UP.L 1 or Lo.L 1 menus by using key.Then you can adjust the value you want by following the parameter adjustment method.

To skip the programme mode while in operation mode press SET and keys at the same time.For returning back to operation mode you should follow the same way while you are in upper menu.

ERROR MESSAGES

----	Means, measured current value is higher than up scale.
____	Means, measured current value is lower than down scale.

PROGRAMMING MODE

A.S.E.t → A.HYS → A.dLY → Out.t → * inPt

UP.L 1. Upper limit value can be adjusted between lower scale and upper scale that specified with c.t.r.r parameter.This parameter can't be lower than (Lo.L 1 + HYS.L + HYS.U) value.

LO.L 1 Lower limit value can be adjusted between lower scale and upper scale that specified with c.t.r.r parameter.This parameter can't be upper than (UP.L 1 - HYS.U - HYS.L) value.

HYS.U. Hysteresis value for upper limit can be adjusted between 0 and c.t.r.r/20. This parameter can't be higher than (UP.L 1 - Lo.L 1 - HYS.L) value.

HYS.L. Hysteresis value for lower limit can be adjusted between 0 and c.t.r.r/20. This parameter can't be higher than (UP.L 1 - Lo.L 1- HYS.U) value.

dLY.U. Delay time for upper limit alarm can be adjusted between 0 and 900 seconds.

dLY.L. Delay time for lower limit alarm can be adjusted between 0 and 900 seconds.

R.out. Alarm output position can be adjusted n.o. or n.c. If n.o. is adjusted , output relay is powered at alarm condition.

tYPE Measuring type can be adjusted Ac ,dc or Acdc.Three leds shows measuring type at the top of the display.

c.t.r.r Current transforming rate can be adjusted between 5.00(/5) and 9999(/5).If this parameter changes upper limit value sets to upper scale ,lower limit value sets to lower scale and hysteresis values set to 0.

(*) There is only inPt menu at the models(EPA741 , EPA741-24 , EPA741S , EPA741S-24) that has no relay.

Parameter Adjustment Method

To adjust the selected parameter hold down SET key then you can adjust by using and keys.

If you hold down the keys for 0.6 seconds while changing the parameters you skip to fast change mode. If you hold down the keys more than 5 seconds the active parameter would change faster.

If you wait 25 seconds before holding down the keys or power off and power up again, you skip to operation mode.

Adjusting Decimal Number

c.t.r.r → SET & → 5.00 → 5.0

If current transforming rate is lower than 10, measuring value can be displayed like (0.00) or (0.0).
If current transforming rate is between 10 and 100 ,measuring value can be displayed like (0.0) or (0).
If current transforming rate is higher than 100, measuring value can be displayed like only (0).
To change the designation of decimal number press SET key while in c.t.r.r menu then select the one you want by using key again.